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Session: HIV and Tuberculosis
Date: Thursday, June 14, 2012
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Room: Lotus 11

Drug-resistant tuberculosis in Thai children

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Background: Drug-resistant (DR) tuberculosis (TB) has been emerging worldwide. Drug resistant TB in children usually were primary resistance and reflected prevalence of the organism in the community. We evaluate the rate, clinical features, treatment and outcome of DR-TB in children.

Methods: A retrospective study was conducted in children aged less than 18 years who were diagnosed with TB at Siriraj hospital, a tertiary care public hospital inBangkok,Thailandfrom January 2008 to December 2011. The rate and characteristics of DR-TB were described.

Results: Of the 230 children diagnosed with TB 33 (14.3%) were DR-TB; 18 microbiologic confirmed, and 15 probable, of which diagnoses were based on exposure to drug-resistant source cases (8), relapse TB (4) and failure to response to first line anti-tuberculosis drugs (3). The drug susceptibility test results were available by culture in 49 cases and molecular techniques (only for isoniazid and rifampin) in 4 cases. Of these respectively, 16/49 and 2/4 were found to be resistant strains. Mono-resistance of isoniazid, pyrazinamide, and streptomycin were identified in 6 (11.3%), 5 (10.2%), and 2 (4%) cases, respectively.MDR-TB was identified in 3 (5.7%) cases and poly-resistance of isoniazid and streptomycin was identified in 2 (3.8%) cases. In comparison with drug susceptible (DS)-TB, children with DR-TB cases more likely to have underlying diseases other than HIV (14.2% vs 30.3%,p=0.02), receive prior TB treatment (6/33 vs 2/197,p <0.001), more likely to had index cases with resistance (9/33 in DR-TB vs 0/197 in DS-TB,p<0.001), and chest X-rays had more consolidation or atelectasis (consolidation 12.1% vs 2%,p=0.016, atelectasis 15.2% vs 3.6%,p=0.016). The mean duration of treatment was 8.0 months in DS- and 12.5 months in DR-TB (p<0.001). There was no difference in rate of cure, complete treatment, or death between DS- and DR-TB.

Conclusion: DR-TB in children was not uncommon. Among those with drug susceptibility test results available, we found high rate of INH mono-resistance and MDR-TB. DR-TB cases need longer duration of treatment but no difference in treatment outcome. Control measures are urgently needed to prevent DR-TB in children.

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Infection control: worldwide perspectives

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Health care-associated infection is a major, global issue for patient safety and its prevention was chosen by WHO Patient Safety as the theme of its First Global Patient Safety Challenge "Clean Care is Safer Care" launched in October 2005. It occurs in every healthcare facility in every country and affects hundreds of millions of patients annually worldwide. To date, a formal statement has been signed by 127 ministries of health as a pledge of support to implement actions to reduce health care-associated infection, corresponding to a 90% coverage of the world population. The Challenge has focused on raising global awareness of the importance of health care-associated infection as a priority patient safety issue with the promotion of hand hygiene as the cornerstone.

The main output of the Challenge, the WHO Guidelines on Hand Hygiene in Health Care, includes a suite of tools to implement the recommended multimodal improvement strategy aimed at improving and sustaining hand hygiene. This model was developed within a clinical setting and further validated to ensure applicability to all healthcare settings worldwide, irrespective of resources available. Embedding hand hygiene promotional activities as a national priority is a key to sustainability.

WHO Patient Safety supports an informal network of coordinators/leaders of such activities with the aim of sharing experiences and learning from each other. At present, there are 43 "campaigning countries/regions" in the network with coordinated activities to promote hand hygiene in health care either as specific activities, or as part of infection prevention and control activities, or patient safety initiatives.

In May 2009, WHO Patient Safety launched the *SAVE LIVES: Clean Your Hands* initiative to encourage healthcare workers to be part of a global movement to improve and sustain hand hygiene. By January 2012, almost 15,000 healthcare facilities had registered their commitment to the initiative. The major challenge for the next decade will be to maintain the "snowball" effect and to show a significant impact on infection prevention across the world. To truly protect our patients, it will take leadership, commitment, a range of actions, and time. The efforts of WHO, together with countries and facilities, should help bring true ownership to healthcare workers in relation to microorganism transmission and its prevention and, subsequently, long-term patient safety improvement.

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